REMARKS

This is a complete and timely response to the non-final Office Action, sent electronically, on August 7, 2008. Claims 1, 3, 5-9, 14 and 15 are pending in the application. Claims 2, 4, 10, 12 and 13 are canceled. Claims 14 and 15 are new. Claims 1, 5, 9 and 11 are amended. The subject matter of amended claims 1 and 9 is supported by Applicants' originally filed specification. Claims 5 and 11 are amended to provide antecedent basis for claimed features. Accordingly, no new matter is added. In light of the foregoing amendments and following remarks, Applicants request reconsideration of the application and pending claims.

Claim Rejections Under 35 USC § 103 – Claims 1-11

A. Statement of the Rejections

Claims 1-3 and 9 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over U.S. Patent No. 6,760,391 to Alb *et al.* (hereinafter, *Alb*) in view of U.S. Patent No. 5,801,781 to Hiroshima et al., hereafter *Hiroshima*.

Claims 4, 5 and 10 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over *Alb* and *Hiroshima*, as applied to claims 1 and 9, in view of U.S. Patent No. 5,808,760 to Gfeller, hereafter *Gfeller*.

Claim 6 stands rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over over *Alb* and *Hiroshima*, as applied to claim 1, in further view of U.S. Patent No. 6,690,650 to Stener, hereafter *Stener* and the Applicants Admitted Prior Art (*AAPA*) (Brief Description of Related Development, page 2, lines 1-7.).

Claim 7 stands rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over over *Alb* and *Hiroshima*, as applied to claim 1, in further view of *Stener*.

Claim 8 stands rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over *Alb* and *Hiroshima*, as applied to claims 1 and 9, in further view of U.S. Patent No. 6,647,058 to Bremer, hereafter *Bremer*.

Claim 11 stands rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over *Alb*, *Hiroshima* and *Gfeller* as applied to claims 9 and 10, in further view of U.S. Patent No. 6,647,058 to Bremer, hereafter *Bremer*.

B. Discussion of the Rejections

Applicants have canceled claims 2, 4 and 10. Consequently, the rejections of claims 2, 4 and 10 are rendered moot.

Applicants' independent claims 1 and 9, as amended, include features that are not found in the proposed combinations.

For a claim to be properly rejected under 35 U.S.C. § 103, "[t]he PTO has the burden under section 103 to establish a *prima facie* case of obviousness. In order to make a proper *prima facie* case of obviousness; three basic criteria must be met, as set forth in MPEP § 706.02(j). First, there must be some suggestion or motivation; either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art references, when combined, must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on Applicant's disclosure."

1. Claims 1 and 3

Applicants' claim 1, as amended, is directed to a rate adaptive system for optical communication networks which includes at least

> "an optical fibre linked to said optical transceivers, said system configured to cause said optical transceivers to transmit and receive optical signals at an initial rate and to adapt said initial rate based upon an error condition responsive to a failure to synchronize a received signal to a transmitted signal by causing said optical transceivers to transmit and receive at a different rate, a rate of data being forwarded per unit time being adjusted by inserting invalid data which can be identified and ignored by a downstream process, wherein said initial rate is lowered according to a predefined percentage of said initial rate in response to said failure to synchronize a received signal to a transmitted signal to avoid the overhead associated with auto-negotiation methods that operate over a control channel."

Applicants respectfully submit that the asserted combination does not disclose, teach or suggest at least the aforementioned features of claim 1.

In contrast with Applicants' claimed rate adaptive system for optical communication networks, the proposed combination of *Alb* and *Hiroshima* is entirely silent regarding Applicants' claimed optical transceivers wherein "said initial rate is lowered according to a predefined percentage of said initial rate in response to said failure to synchronize a received signal to a transmitted signal to avoid the overhead associated with auto-negotiation methods that operate over a control channel."

Alb (FIGs. 1, 3 and 4) shows various embodiments of a system that couples a central office 20 to customer premises (CPE 42, CPE 44 and CPE 46) via respective links 12, 14 and 16. The link 12, in the embodiments illustrated in FIG. 3 and FIG. 4, is clearly shown as a twisted-pair of copper wires typical in the communication channel between a central office and customer premises. *Alb*, column 4, lines 20-24, indicates that links 12, 14 and 16 can be made up of wider-bandwidth physical media such as coaxial cable, optical fiber and radio.

Alb is cited for the alleged disclosure of an optical system capable of transmitting and receiving signals at a plurality of rates to each other. Applicants disagree. *Alb* does not teach an optical system. *Alb* teaches a digital subscriber line (DSL) system that specifically uses the twisted-pair of copper wires between a central office and a customer premises modem.

In further contrast with Applicants' claimed rate adaptive optical communication system, *Alb* discloses an overhead intensive system and method for auto-negotiating line rate changes over a command channel in a digital subscriber line (DSL). *Alb* discloses a system that specifically adjusts the line rate in response to a sliding time window to avoid thrashing. Accordingly, the communication system disclosed in *Alb* executes a line rate change in a manner that is in direct contrast with Applicants' claimed system, which lowers said initial rate "according to a predefined percentage of said initial rate in response to said failure to synchronize a received signal to a transmitted signal to avoid the overhead associated with auto-negotiation methods that operate over a control channel."

The Office Action admits that *Alb* fails to disclose that a data rate is adjusted by inserting invalid data which can be identified and ignored by a downstream

process. See Office Action, page 3, fourth paragraph. In an effort to remedy the failure of *Alb* to disclose, teach or suggest each feature of Applicants' claimed system, *Hiroshima* is introduced for the alleged teaching that a data rate is adjusted by inserting invalid data which can be identified and ignored by a downstream process. *Hiroshima* discloses an apparatus for converting motion picture streams in a first Motion Pictures Experts Group (MPEG) format to transport streams in a second MPEG format different from the first MPEG format.

First, even if *Hiroshima* teaches that a data rate is adjusted by inserting invalid data which can be identified and ignored by a downstream process, *Hiroshima* does not remedy the failure of *Alb* to disclose, teach or suggest at least the feature that an initial rate is lowered "according to a predefined percentage of said initial rate in response to said failure to synchronize a received signal to a transmitted signal to avoid the overhead associated with auto-negotiation methods that operate over a control channel." Applicants respectfully submit that *Hiroshima* does not add anything to the disclosure of *Alb* that would remedy the aforementioned deficiency.

In addition, Applicants submit that there is no motivation to combine *Alb* and *Hiroshima* to reach Applicants' claimed invention. "Obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching or suggestion supporting the combination. Under section 103, teachings of references can be combined *only* if there is some suggestion or incentive to do so." *ACS Hospital Systems, Inc., v. Montefiore Hospital*, 732 F.2d 1572, 1577; 221 U.S.P.Q. 929, 933 (Fed. Cir. 1984). Further, "[t]here must be some reason, suggestion, or motivation found in the prior art whereby a person of ordinary skill in the field of the invention would make the combination." *In re, Oetiker*, 977 F.2d 1443, 1447, 24 U.S.P.Q.2d 1443 (Fed. Cir. 1992).

One of ordinary skill in the art of optical communications systems would not look to combine select features of the DSL system disclosed by *Alb* with select features from the motion picture data stream converter of *Hiroshima* to reach Applicants' claimed system. DSL systems, like the one disclosed in *Alb*, include a control channel and use auto-negotiation to establish line rates between a central office and a modem located within a customer location remote from the central office. Thus, one of ordinary skill in the art of optical fibre-based communication networks,

which do not have an automatic negotiating scheme or control channel, is unlikely to consider select features from *Alb*.

Furthermore, one of ordinary skill in the art of optical networks is even less likely to consider select features from a hardware apparatus that converts MPEG1 streams into MPEG2 transport streams, when improving an optical network. While MPEG data can be transported over an optical network, an optical network does not and should not convert data from a first format to a second format.

Moreover, one of ordinary skill in the art of optical networks would not appreciate a reasonable expectation of success of combining *Alb* and *Hiroshima* to arrive at Applicants' claimed system. Accordingly, Applicants respectfully submit that the combination of *Alb* and *Hiroshima* is improper. Consequently, for at least these reasons, favorable reconsideration and withdrawal of the rejection of independent claim 1 under 35 U.S.C. § 103 are respectfully requested.

Further, Applicants respectfully submit that dependent claim 3, which depends directly from allowable independent claim 1 and includes all the features of claim 1, is allowable for at least the reason that claim 3 depends from allowable independent claim 1. *In re Fine,* 837 F.2d 1071, 5 USPQ 2d 1596, 1598 (Fed. Cir. 1998).

Accordingly, favorable reconsideration and withdrawal of the rejection of dependent claim 3 under 35 U.S.C. § 103 are respectfully requested.

2. Claim 9

Applicants' claim 9, as amended, is directed to a rate adaptive method for operating an optical communication network which includes at least the steps of "evaluating said data responsive to a failure to synchronize a received signal to a transmitted signal to determine if an error condition exists," and "adapting said rate based upon said evaluation by transmitting and receiving at a different rate by inserting invalid data which can be identified and ignored by a downstream process, wherein adapting said rate comprises lowering said initial rate according to predefined percentages of said initial rate in response to said failure to synchronize a received signal to a transmitted signal to avoid the overhead associated with auto-negotiation over a control channel."

Applicants respectfully submit that the asserted combination does not disclose, teach or suggest at least the aforementioned steps of claim 9.

In contrast with Applicants' claimed method, the proposed combination of *Alb* and *Hiroshima* is entirely silent regarding Applicants' claimed steps of "evaluating said data responsive to a failure to synchronize a received signal to a transmitted signal to determine if an error condition exists," and "adapting said rate based upon said evaluation by transmitting and receiving at a different rate by inserting invalid data which can be identified and ignored by a downstream process, wherein adapting said rate comprises lowering said initial rate according to predefined percentages of said initial rate in response to said failure to synchronize a received signal to a transmitted signal to avoid the overhead associated with auto-negotiation over a control channel."

Alb (FIGs. 1, 3 and 4) shows various embodiments of a system that couples a central office 20 to customer premises (CPE 42, CPE 44 and CPE 46) via respective links 12, 14 and 16. The link 12, in the embodiments illustrated in FIG. 3 and FIG. 4, is clearly shown as a twisted-pair of copper wires typical in the communication channel between a central office and customer premises. *Alb*, column 4, lines 20-24, indicates that links 12, 14 and 16 can be made up of wider-bandwidth physical media such as coaxial cable, optical fiber and radio.

Alb is cited for the alleged disclosure of an optical system capable of transmitting and receiving signals at a plurality of rates to each other. Applicants disagree. *Alb* does not teach an optical system. *Alb* teaches a DSL system that specifically uses the twisted-pair of copper wires between a central office and a customer premises modem.

In further contrast with Applicants' claimed rate adaptive optical communication system, *Alb* discloses an overhead intensive system and method for auto-negotiating line rate changes over a command channel in a DSL-based system. *Alb* specifically adjusts the line rate in response to a sliding time window to avoid thrashing. Accordingly, the communication system disclosed in *Alb* executes a line rate change in a manner that is in direct contrast with Applicants' claimed method, which comprises "lowering said initial rate according to predefined percentages of said initial rate in response to said failure to synchronize a received signal to a

transmitted signal to avoid the overhead associated with auto-negotiation over a control channel."

The Office Action admits that *Alb* fails to disclose that a data rate is adjusted by inserting invalid data which can be identified and ignored by a downstream process. See Office Action, page 3, fourth paragraph. In an effort to remedy the failure of *Alb* to disclose, teach or suggest each feature of Applicants' claimed system, *Hiroshima* is introduced for the alleged teaching that a data rate is adjusted by inserting invalid data which can be identified and ignored by a downstream process. *Hiroshima* discloses an apparatus for converting motion picture streams in a first MPEG format to transport streams in a second MPEG format different from the first MPEG format.

First, even if *Hiroshima* teaches that a data rate is adjusted by inserting invalid data which can be identified and ignored by a downstream process, *Hiroshima* does not remedy the failure of *Alb* to disclose, teach or suggest at least the steps of "evaluating said data responsive to a failure to synchronize a received signal to a transmitted signal to determine if an error condition exists," and "adapting said rate based upon said evaluation by transmitting and receiving at a different rate by inserting invalid data which can be identified and ignored by a downstream process, wherein adapting said rate comprises lowering said initial rate according to predefined percentages of said initial rate in response to said failure to synchronize a received signal to a transmitted signal to avoid the overhead associated with auto-negotiation over a control channel." Applicants respectfully submit that *Hiroshima* does not add anything to the disclosure of *Alb* that would remedy the aforementioned deficiency.

In addition, Applicants submit that there is no motivation to combine *Alb* and *Hiroshima* to reach Applicants' claimed invention. That is, one of ordinary skill in the art of optical communications systems would not look to combine select features of the DSL system disclosed by *Alb* with select features from the motion picture data stream converter of *Hiroshima* to reach Applicants' claimed method. DSL systems, like the one disclosed in *Alb*, include a control channel and use auto-negotiation to establish line rates between a central office and a modem located within a customer location remote from the central office. Thus, one of ordinary skill in the art of

optical fibre networks, which do not have an automatic negotiation scheme or control channel, is unlikely to consider select features from *Alb*.

Furthermore, one of ordinary skill in the art of optical networks is even less likely to consider select features from a hardware apparatus that converts MPEG1 streams into MPEG2 transport streams, when improving an optical network. While MPEG encoded data can be transported over an optical network, an optical network does not and should not convert MPEG encoded data from a first format to a second format.

Moreover, one of ordinary skill in the art of optical networks would not appreciate a reasonable expectation of success of combining *Alb* and *Hiroshima* to arrive at Applicants' claimed system. Accordingly, Applicants respectfully submit that the combination of *Alb* and *Hiroshima* is improper. Consequently, for at least these reasons, favorable reconsideration and withdrawal of the rejection of independent claim 9 under 35 U.S.C. § 103 are respectfully requested.

3. Claim 5

As shown above, the combined teachings of *Alb* and *Hiroshima* do not teach all features of independent claim 1, from which claim 5 depends. *Alb* and *Hiroshima* do not disclose, teach or suggest Applicants' claimed optical network system wherein "said initial rate is lowered according to a predefined percentage of said initial rate in response to said failure to synchronize a received signal to a transmitted signal to avoid the overhead associated with auto-negotiation methods that operate over a control channel."

Gfeller is cited for its alleged disclosure of four predetermined rates that provide flexibility in system design and simplification of the integration of systems operating with different data rates. *Gfeller* specifically teaches adapting the data rate and/or the optical power of the transmitter in dependence of a signal-to-noise ratio of the receiver. Applicants respectfully submit that *Gfeller* does not add anything to the combination of *Alb* and *Hiroshima* that would remedy the aforementioned deficiency.

Accordingly, the proposed combination fails to establish a *prima facie* case of obviousness for at least the reason that the combined teachings do not teach all features of dependent claim 5, which depends directly from claim 1 and includes all

the features of claim 1. Consequently, for at least this reason, favorable reconsideration and withdrawal of the rejection of dependent claim 5 under 35 U.S.C. § 103 are respectfully requested.

In addition, Applicants submit that there is no motivation to combine *Alb*, *Hiroshima* and *Gfeller* to reach Applicants' claimed invention. That is, one of ordinary skill in the art of optical communications systems would not look to combine select features of the DSL system disclosed by *Alb* with select features from the motion picture data stream converter of *Hiroshima* and to further combine select features from the wireless communication system of *Gfeller* to reach Applicants' claimed system. The proposed combination, both taken alone, and in combination with the knowledge of one skilled in the art, reflects impermissible hindsight reconstruction of the claimed invention.

DSL systems, like the one disclosed in *Alb*, include a control channel and use auto-negotiation to establish line rates between a central office and a modem located within a customer location remote from the central office. Thus, one of ordinary skill in the art of optical fibre-based networks, which do not have a control channel, is unlikely to consider select features from *Alb*. Those of ordinary skill in optical fibre communication networks are unlikely to look to *Gfeller* for this same reason as both the abstract and the introductory figure indicate that a control channel is used to adapt a data rate or optical power in an infrared communication system. Optical fibre-based networks do not have an automatic negotiation scheme or control channel.

Furthermore, one of ordinary skill in the art of optical fibre-based communication networks is even less likely to consider select features from a hardware apparatus that converts MPEG1 streams into MPEG2 transport streams, when improving an optical network. While MPEG encoded data can be transported over an optical network, an optical network does not and should not convert MPEG encoded data from a first format to a second format.

Moreover, one of ordinary skill in the art of optical fibre-based communication networks would not appreciate a reasonable expectation of success of combining *Alb*, *Hiroshima* and *Gfeller* to arrive at Applicants' claimed system. Accordingly, Applicants respectfully submit that the combination of *Alb*, *Hiroshima* and *Gfeller* is improper.

Consequently, favorable reconsideration and withdrawal of the rejection of dependent claim 5 under 35 U.S.C. § 103 are respectfully requested.

4. Claim 6

As shown above, the combined teachings of *Alb* and *Hiroshima* do not teach all features of independent claim 1, from which claim 6 depends. *Alb* and *Hiroshima* do not disclose, teach or suggest Applicants' claimed optical network system wherein "said initial rate is lowered according to a predefined percentage of said initial rate in response to said failure to synchronize a received signal to a transmitted signal to avoid the overhead associated with auto-negotiation methods that operate over a control channel."

Stener is cited for its alleged disclosure of setting an initial rate at the highest possible rate and upon detecting a link failure, adjusting the rate of transmission by an order of magnitude. *Stener* specifically teaches shifting from one physical interface device operating at 100 MB/sec to a second physical interface device operating at 10 MB/sec in response to detected errors. Applicants respectfully submit that *Stener* does not add anything to the combination of *Alb* and *Hiroshima* that would remedy the aforementioned deficiency.

AAPA is cited for the admission that fibre links that transport data at a rate of at least 10 Gb/s exist. Applicants respectfully submit that *AAPA* does not add anything to the combination of *Alb*, *Hiroshima* and *Stener* that would remedy the aforementioned deficiency.

Accordingly, the proposed combination fails to establish a *prima facie* case of obviousness for at least the reason that the combined teachings do not teach all features of dependent claim 6, which depends directly from claim 1 and includes all the features of claim 1. Consequently, for at least this reason, favorable reconsideration and withdrawal of the rejection of dependent claim 6 under 35 U.S.C. § 103 are respectfully requested.

In addition, Applicants submit that there is no motivation to combine *Alb*, *Hiroshima* and *Stener* to reach Applicants' claimed invention. That is, one of ordinary skill in the art of optical fibre-based communication netowrks would not look to combine select features of the DSL system disclosed by *Alb* with select

features from the motion picture data stream converter of *Hiroshima* and further to combine select features from the network repeater of *Stener* to reach Applicants' claimed system. The proposed combination, both taken alone, and in combination with the knowledge of one skilled in the art, reflects impermissible hindsight reconstruction of the claimed invention.

DSL systems, like the one disclosed in *Alb*, include a control channel and use auto-negotiation to establish line rates between a central office and a modem located within a customer location remote from the central office. Thus, one of ordinary skill in the art of optical networks, which do not have an automatic negotiation scheme or control channel, is unlikely to consider select features from *Alb*. Those of ordinary skill in optical fibre-based communication networks are unlikely to look to *Stener* for this same reason as the abstract indicates that a control channel is used to adapt a data rate using auto-negotiation techniques.

Furthermore, one of ordinary skill in the art of optical fibre-based communication networks is even less likely to consider select features from a hardware apparatus that converts MPEG1 streams into MPEG2 transport streams, when improving an optical network. While MPEG encoded data can be transported over an optical network, an optical network does not and should not convert MPEG encoded data from a first format to a second format.

Moreover, one of ordinary skill in the art of optical fibre-based communication networks would not appreciate a reasonable expectation of success of combining *Alb*, *Hiroshima* and *Stener* to arrive at Applicants' claimed system. Accordingly, Applicants respectfully submit that the combination of *Alb*, *Hiroshima*, *Stener* and *AAPA* is improper.

Consequently, favorable reconsideration and withdrawal of the rejection of dependent claim 6 under 35 U.S.C. § 103 are respectfully requested.

5. Claim 7

As shown above, the combined teachings of *Alb* and *Hiroshima* do not teach all features of independent claim 1, from which claim 7 depends. *Alb* and *Hiroshima* do not disclose, teach or suggest Applicants' claimed optical fibre-based communication networks wherein "said initial rate is lowered according to a

predefined percentage of said initial rate in response to said failure to synchronize a received signal to a transmitted signal to avoid the overhead associated with auto-negotiation methods that operate over a control channel."

Stener is cited for its alleged disclosure of setting an initial rate at the highest possible rate and upon detecting a link failure, adjusting the rate of transmission by an order of magnitude. *Stener* specifically teaches shifting from one physical interface device operating at 100 MB/sec to a second physical interface device operating at 10 MB/sec in response to detected errors. Applicants respectfully submit that *Stener* does not add anything to the combination of *Alb* and *Hiroshima* that would remedy the aforementioned deficiency.

Accordingly, the proposed combination fails to establish a *prima facie* case of obviousness for at least the reason that the combined teachings do not teach all features of dependent claim 7, which depends directly from claim 1 and includes all the features of claim 1. Consequently, for at least this reason, favorable reconsideration and withdrawal of the rejection of dependent claim 7 under 35 U.S.C. § 103 are respectfully requested.

In addition, Applicants submit that there is no motivation to combine *Alb*, *Hiroshima* and *Stener* to reach Applicants' claimed invention. That is, one of ordinary skill in the art of optical fibre-based communication networks would not look to combine select features of the DSL system disclosed by *Alb* with select features from the motion picture data stream converter of *Hiroshima* and further to combine select features from the network repeater of *Stener* to reach Applicants' claimed system. The proposed combination, both taken alone, and in combination with the knowledge of one skilled in the art, reflects impermissible hindsight reconstruction of the claimed invention.

DSL systems, like the one disclosed in *Alb*, include a control channel and use auto-negotiation to establish line rates between a central office and a modem located within a customer location remote from the central office. Thus, one of ordinary skill in the art of optical networks, which do not have an automatic negotiation scheme or control channel, is unlikely to consider select features from *Alb*. Those of ordinary skill in optical fibre-based communication networks are unlikely to look to *Stener* for

this same reason as the abstract indicates that a control channel is used to adapt a data rate using auto-negotiation techniques.

Furthermore, one of ordinary skill in the art of optical fibre networks is even less likely to consider select features from a hardware apparatus that converts MPEG1 streams into MPEG2 transport streams, when improving an optical network. While MPEG encoded data can be transported over an optical network, an optical network does not and should not convert MPEG encoded data from a first format to a second format.

Moreover, one of ordinary skill in the art of optical fibre-based communication networks would not appreciate a reasonable expectation of success of combining *Alb*, *Hiroshima* and *Stener* to arrive at Applicants' claimed system. Accordingly, Applicants respectfully submit that the combination of *Alb*, *Hiroshima*, *Stener* and *AAPA* is improper.

Consequently, favorable reconsideration and withdrawal of the rejection of dependent claim 7 under 35 U.S.C. § 103 are respectfully requested.

6. Claim 8

As shown above, the combined teachings of *Alb* and *Hiroshima* do not teach all features of independent claim 1, from which claim 7 depends. *Alb* and *Hiroshima* do not disclose, teach or suggest Applicants' claimed optical network system wherein "said initial rate is lowered according to a predefined percentage of said initial rate in response to said failure to synchronize a received signal to a transmitted signal to avoid the overhead associated with auto-negotiation methods that operate over a control channel."

Bremer is cited for its alleged disclosure of a network management system used by a technician to target communication links that would benefit the most from power and/or data rate adaptation. *Bremer* specifically teaches shifting from one data rate to another next lowest data rate in a table of data rates in response to a measured signal-to-noise ratio. Applicants respectfully submit that *Bremer* does not add anything to the combination of *Alb* and *Hiroshima* that would remedy the aforementioned deficiency.

Accordingly, the proposed combination fails to establish a *prima facie* case of obviousness for at least the reason that the combined teachings do not teach all features of dependent claim 8, which depends directly from claim 1 and includes all the features of claim 1. Consequently, for at least this reason, favorable reconsideration and withdrawal of the rejection of dependent claim 7 under 35 U.S.C. § 103 are respectfully requested.

In addition, Applicants submit that there is no motivation to combine *Alb*, *Hiroshima* and *Bremer* to reach Applicants' claimed invention. That is, one of ordinary skill in the art of optical fibre-based communication networks would not look to combine select features of the DSL system disclosed by *Alb* with select features from the motion picture data stream converter of *Hiroshima* and further to combine select features from the DSL system of *Bremer* to reach Applicants' claimed system. The proposed combination, both taken alone, and in combination with the knowledge of one skilled in the art, reflects impermissible hindsight reconstruction of the claimed invention.

DSL systems, like the one disclosed in *Alb* and *Bremer* include a control channel and use auto-negotiation to establish line rates between a central office and a modem located within a customer location remote from the central office. Thus, one of ordinary skill in the art of optical networks, which do not have an automatic negotiation scheme or control channel, is unlikely to consider select features from *Alb* or *Bremer*.

Furthermore, one of ordinary skill in the art of optical fibre-based communication networks is even less likely to consider select features from a hardware apparatus that converts MPEG1 streams into MPEG2 transport streams, when improving an optical network. While MPEG encoded data can be transported over an optical network, an optical network does not and should not convert MPEG encoded data from a first format to a second format.

Moreover, one of ordinary skill in the art of optical fibre-based communication networks would not appreciate a reasonable expectation of success of combining *Alb*, *Hiroshima* and *Bremer* to arrive at Applicants' claimed system. Accordingly, Applicants respectfully submit that the combination of *Alb*, *Hiroshima* and *Bremer* is improper.

Consequently, favorable reconsideration and withdrawal of the rejection of dependent claim 8 under 35 U.S.C. § 103 are respectfully requested.

7. Claim 11

Applicants' dependent claim 11 includes at least one feature that is not found in the proposed combination. Specifically, dependent claim 11 depends directly from claim 9, which includes at least the steps of "evaluating said data responsive to a failure to synchronize a received signal to a transmitted signal to determine if an error condition exists," and "adapting said rate based upon said evaluation by transmitting and receiving at a different rate by inserting invalid data which can be identified and ignored by a downstream process, wherein adapting said rate comprises lowering said initial rate according to predefined percentages of said initial rate in response to said failure to synchronize a received signal to a transmitted signal to avoid the overhead associated with auto-negotiation over a control channel."

Gfeller is cited for its alleged disclosure of four predetermined rates that provide flexibility in system design and simplification of the integration of systems operating with different data rates. *Gfeller* specifically teaches adapting the data rate and/or the optical power of the transmitter in dependence of a signal-to-noise ratio of the receiver.

Bremer is cited for its alleged disclosure of a network management system used by a technician to target communication links that would benefit the most from power and/or data rate adaptation. *Bremer* specifically teaches shifting from one data rate to another next lowest data rate in a table of data rates in response to a measured signal-to-noise ratio. Applicants respectfully submit that *Gfeller* and *Bremer* do not add anything to the combination of *Alb* and *Hiroshima* that would remedy the aforementioned deficiency.

Accordingly, the proposed combination fails to establish a *prima facie* case of obviousness for at least the reason that the combined teachings do not teach all features of dependent claim 11, which depends directly from claim 9 and includes all the features of claim 9. Consequently, favorable reconsideration and withdrawal of the rejection of dependent claim 11 under 35 U.S.C. § 103 are respectfully requested.

In addition, Applicants submit that there is no motivation to combine *Alb*, *Hiroshima*, *Gfeller* and *Bremer* to reach Applicants' claimed invention. That is, one of ordinary skill in the art of optical fibre-based communication networks would not look to combine select features of the DSL systems disclosed by *Alb* and *Bremer* with select features from the motion picture data stream converter of *Hiroshima* and further to combine select features from the infrared communication system of *Gfeller* to reach Applicants' claimed method. The proposed combination, both taken alone, and in combination with the knowledge of one skilled in the art, reflects impermissible hindsight reconstruction of the claimed invention.

DSL systems, like the one disclosed in *Alb* and *Bremer* include a control channel and use auto-negotiation to establish line rates between a central office and a modem located within a customer location remote from the central office. Thus, one of ordinary skill in the art of optical fibre-based communication networks, which do not have an automatic negotiation scheme or control channel, is unlikely to consider select features from *Alb* or *Bremer*. Infrared wireless communication systems, like the system disclosed in *Gfeller*, also include a control channel and would likely not be considered.

Furthermore, one of ordinary skill in the art of optical fibre-based communication networks is even less likely to consider select features from a hardware apparatus that converts MPEG1 streams into MPEG2 transport streams, when improving an optical network. While MPEG encoded data can be transported over an optical network, an optical network does not and should not convert MPEG encoded data from a first format to a second format.

Moreover, one of ordinary skill in the art of optical fibre-based communication networks would not appreciate a reasonable expectation of success of combining *Alb*, *Hiroshima, Gfeller* and *Bremer* to arrive at Applicants' claimed method. Accordingly, Applicants respectfully submit that the combination of *Alb*, *Hiroshima*, *Gfeller* and *Bremer* is improper.

Consequently, favorable reconsideration and withdrawal of the rejection of dependent claim 11 under 35 U.S.C. § 103 are respectfully requested.

New Claims – 14 and 15

New claims 14 and 15 are patentable over the cited art of record for at least the reasons that claim 14 depends directly from claim 1 and includes all the features of claim 1 and claim 15 depends directly from claim 9 and includes all the features of claim 9. *In re Fine, supra.*

CONCLUSION

For at least the reasons set forth above, Applicants respectfully submit that pending claims 1, 3, 5-9, 14 and 15 are allowable over the cited art of record and the present application is in condition for allowance. Accordingly, a Notice of Allowance is respectfully solicited. Should the Examiner have any comments regarding the Applicants' response, Applicants request that the Examiner telephone Applicants' undersigned attorney.

Respectfully submitted,

SMITH FROHWEIN TEMPEL GREENLEE BLAHA LLC

By: /Robert A. Blaha/
Robert A. Blaha
Registration No. 43,502
(770) 709–0069